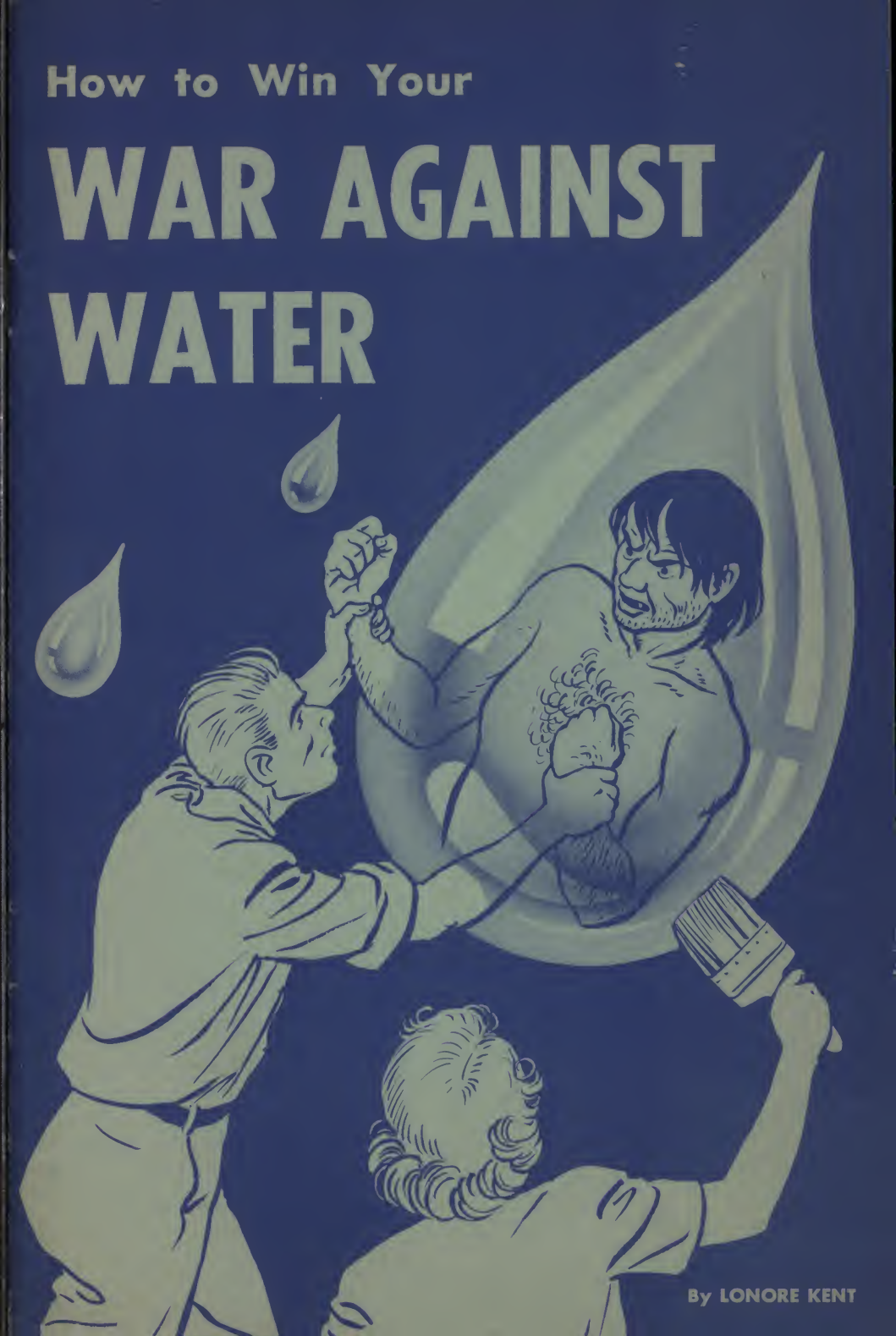
How to Win Your

WAR AGAINST WATER



By LONORE KENT

Noah pitched the Ark

NOAH KNEW A THING OR TWO when he "pitched the Ark within and without with pitch." He wasn't taking any chances. He figured his craft had to be absolutely safe from the destructive force of storm and sea. Consequently, he used the best method of waterproofing he knew. He coated interior and exterior surfaces with asphalt.

Modern-day skippers take similar precautions. They know they're engaged in an endless war against water. They know, too, that they must keep their vessels water-tight . . . that every surface must be safeguarded with a protective coating to shield it from the rusting, rotting devilment of water.

You may not be even the captain of dinghy, but you're "in the same boat" as Noah and the modern skipper. Whether he realizes it or not, EVERY householder is engaged in a continual war against water.

You may not be captain of a dinghy...but you're in the same boat.

If you're to come out of the battle as conqueror, you need to know the exact nature of your enemy and the tactics he employs. Rest assured, he's no mean strategist. While he frequently resorts to direct attack, his most insidious methods include infiltration.

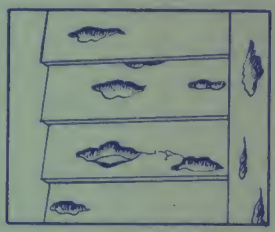
SUPPOSE YOU HAVE A BRAND-NEW HOUSE. It's the joy and delight of your soul. It's also the biggest financial investment you have ever tackled. Consequently, both your pocketbook and your pride are involved in keeping your new house topnotch.

You may think your new house is shipshape and "seaworthy." Probably it is—but there's a chance that your builder may not have guarded against moisture hazards . . . that walls may be stained or paint may peel before twelve months have passed.

WALLS MAY BE STAINED

What's the cause? How can it happen? What's to be done about it?

Let's take one question at a time.



PAINT MAY PEEL

THE VILLAIN OF THE PIECE is "dat ol' debbil" Moisture. He comes in as many guises as a chameleon. Sometimes he may look as bland as steam that rises while you boil the baby's bottles. He may also start his dirty work in your shining-clean laundry, in the kitchen, or in the grain of the green lumber that was built into your house before it was thoroughly dry. In his program of deviltry, he may be innocently aided and abetted by the insulation that adds so much to the modern house. The insulation, you see, helps make a home weathertight. In doing so, however, it may prevent the moisture *inside* your house from escaping in a harmless manner.

How can this be?

Listen to the saga of three little pools of moisture. It begins with sound effects. There is a shrill, insistent whistling as the singing tea kettle on the stove chirps cheerfully that the water it contains is boiling lustily. Above the kettle, a cloud of steam rises heavenward. Oh! But

it doesn't get there! Its progress is impeded by the ceiling. And the misty vapor halts . . . undecided.

The voice of the tea kettle is joined by another. From the bathroom comes Dad's barbershop tenor—above the rushing sound of the shower. Here, too, clouds of steam are rising and—lacking suitable outlet—are forming whole battalions of droplets on the bathroom walls and ceiling.

Crash! And gurgle! Another sound joins the symphony. This time it's Junior's bottle as he flings it from his high chair. Mother looks ruefully downward as the milk spreads rapidly over the carpet, then dabs frantically with the nearest towel.

They seem innocent enough, these three pools of moisture: the milk from the bottle, the steam from the shower, the vapor rising from the whistling tea kettle. But are they? Oh, no! Like the mild-mannered murderesses in "Arsenic and Old Lace," they're up to no good!

Where do they go from here? Believe it or not, they have an engagement. At the *"dewpoint"*—if you please.

What's a "dewpoint?"

In the wall of a structure it's the coolest surface. Here, vapors and steam condense, or turn into drops of water. Scientists must have been feeling poetic when they named this point for the drops of dew that look like diamonds on a cob-

web at dawn. If *you* could cut a cross section through the walls of *your* house . . . if *you* could get a clear view of this procedure, *you* wouldn't feel poetic. *You'd* feel like screaming "Don't!" and christening it the *"don't*-point!" You'd demand that moisture cease its villainy.

Up to now, the moisture in the walls of your house *can* have stained plaster, rotted wood and rusted metal. After the various vapors reach the "dewpoint," they're ready to proceed with concentrated devilment. They can even force their way through outer siding, masonry, and trim. They can push the paint loose from its moorings and can cause it to blister, then peel!

When you see paint that has met with such a fate, recognize the fact that it's a guidepost. Find the source of the moisture that caused the damage, correct the defect, and you will solve your problem.

INTERIOR MOISTURE ISN'T, of course, the only villainous offender. It is, however, the lesser known. We're fairly well acquainted with the trouble caused by moisture that attacks from outdoors. If we're not sure how well our roofs are safeguarded, we may press our noses against a streaming window pane and worry whether the roof will leak and stain the bedroom ceiling. At the same time, we may vow to have the roofer check the flashings when the sun comes out.

We may also know it's wise to correct construction where wood comes close to sodden earth. We probably know that studs and siding which touch the ground will draw destroying moisture.

STAND GUARD AT T

Your enemy, Moisture, kno
tures are open to attack.
and cause costly damage.
at his dangerous game!

IN THE ATTIC

Water or ice collects in cold portions of uninsulated, unventilated attics. A chilled metal surface, such as a vent pipe, is likely to harbor water or ice. So is the junction between the ceiling and the cold roof. Your solution is to improve ventilation.

IN THE BATHROOM

When taking a bath or shower, allow damaging moisture to escape by leaving the window or door partly open.

IN THE PLUMBING

Faulty plumbing is another source of trouble. Interior wall paint can be ruined by lime salts that form as the result of a leak. Water from the wet wall can also travel outwards and damage the paint on the outside of the house. Better call the plumber.

IN THE KITCHEN

Damaged paint on exterior walls outside the kitchen can be caused by the high humidity from cooking and washing. This excess moisture can be removed by installing a suction-type fan in the kitchen.

IN THE BASEMENT

Automatic humidifiers installed in heating plants or unvented gas-burning water heaters can cause high humidity. This may reveal itself by "sweating out" on cold water pipes or causing walls to mildew. Water may enter the basement through the floor from poorly drained soil. Constant use of laundry equipment is another source of moisture vapor. Your cue is to improve ventilation and humidity control.

ON WET PLASTER

Where it is necessary to paint plaster before it has had an opportunity to age properly, use special alkali-resisting paints.

HESE DANGER SPOTS

vs where man-made struc-
t these points he can enter
It's up to YOU to beat him

AROUND THE CHIMNEY
Leaky flashings around vents and chimneys . . . also damaged brickwork in the chimney . . . allow water to enter the house from the outside. You have need for repairmen.

ON THE ROOF
Shingles or roofing must be kept in good repair at all times.

AT GUTTERS AND DOWNSPOUTS
Keep gutters clean and free from leaves so they don't overflow and cause trouble. Peeling paint is often found under eaves and around windows that are frosted on the inside. A blocked or poorly drained downspout can cause dampness in the wall.

NEAR THE WINDOWS
Damage to a paint job that is caused by rain draining downwards behind a poorly flashed or fitted window frame can be prevented by installing close-fitting, well caulked window frames. Install proper flashings at top of window—also seal butt ends of siding with paint. Moisture-coated window panes, incidentally, reveal the presence of vapor that is not visible on other interior surfaces.

AT SIDING
To avoid blistering and staining, keep wooden studs and siding from touching the ground.

ON THE PORCH
Peeling and cracking paint above and below a concrete porch floor can be prevented by filling the space between the slab and the siding with a good grade of caulking compound — also by painting the butt ends of all studs and siding.

ON ALL EXTERIOR SURFACES
No type of exterior surface—wood, brick, stone, or stucco—is immune to the attacks of moisture. Coatings are available for all types of masonry construction.

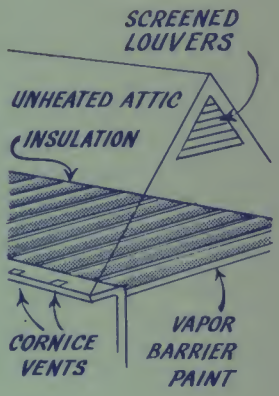
These are two of the usual, familiar places where moisture does its dirty work. We *should* know how to correct such construction defects. It's the interior moisture puzzle that may baffle us. This hasn't been a problem many seasons. In years gone by the houses usually weren't built so tight. Inside moisture could make its getaway through cracks and windows, doors and chimneys. And so could heat, causing a continuous fuel loss in the winter. Because of this needless waste, we now add insulation. We aim to keep heat inside in the winter . . . outside in summer. In doing so, we sometimes overlook the moisture problem we have thus created.

WHAT CAN BE DONE ABOUT IT? A very great deal. It's vitally important, of course, to keep all this in mind when you begin new building. But if you or your contractor overlooked the matter, much can be done to rectify it. New home owners, of course, aren't the only ones who need to keep a look-out. Old houses are not immune to danger. They need careful checking, too.

THERE ARE THREE IMPORTANT STEPS to take in beating your adversary—whether your house is new or old.

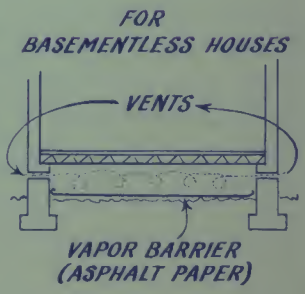
One is to improve your facilities for ventilation. A second is to guard against excess humidity in your household. The third is to install barriers to halt the attack of moisture before it gains real headway.

HERE, FOR INSTANCE, ARE THREE WAYS to improve ventilation. The first involves the very simple practice of opening the bathroom window or leaving the door ajar when you take a bath or shower. The second is to install a suction-type fan in the kitchen window to draw off high humidity caused by cooking and washing. A third is to keep basement windows open in warm, dry weather. This will help eliminate moisture that may accumulate on the cool walls and underground surfaces.



In constructing new buildings, it is, of course, vitally important to make sure that you have adequate facilities for ventilation. Screened louvers and metal vents should be installed in attics. The total size of such openings should be at least one quarter square inch for every square foot of attic floor area. Screened openings should also be included in the foundation walls of houses that have crawl spaces. For homes without basements—a heavy asphalt building paper should be placed beneath the house to block the rise of vapor. In such homes, you need rot-proof sub-flooring and joists of concrete or pressure-treated lumber, in addition to good ground drainage.

IN GUARDING AGAINST EXCESS HUMIDITY, remember that much of it gathers within a house in the process of everyday living. In a small, tightly built home, such normal moisture usually provides sufficient humidity for average comfort. Some people, though, prefer higher humidity and add humidifiers to heating plants. If your house is built to prevent condensation, you can have



whatever humidity suits you best. If not, avoid introducing additional moisture.

NOW, ABOUT THE IMPORTANT VAPOR BARRIERS. Their purpose is to stop moisture from gaining access to the walls of a house from the room side. Such important protection can be achieved in various ways.

If your house is already built, you can bar moisture's entrance to wall and ceiling surfaces with several coats of the type of paint that impedes the passage of vapor. Your dealer can advise you regarding the merits of various coatings to use in this capacity. Before your paint is applied, be sure all cracks and crevices around windows, doors and baseboards are filled with crack filler or patching plaster.

If your house is still in the blueprint stage, you can plan, also, to bar moisture in this same manner. Important additional protection, however, can be installed in the form of a moisture barrier that is applied before a wall or ceiling is plastered. Such a barrier may also be an integral part of the insulation or wallboard. To be wholly effective, it must be continuous . . . unbroken. All joints must be lapped and securely fastened on studs, joists or bracing. In applying vapor barriers, such places as the space under the attic stairs, openings around ceiling light fixtures and cracks around attic doors must not be overlooked.

WHEN MOISTURE COMES AGAINST SUCH BARRIERS, its pathway is blocked. It cannot ooze its way into the walls and cause you costly damage. When roofs and gutters and flashings . . . when all outside wall surfaces . . . are carefully and adequately protected, you are safeguarded against the attacks of your perennial enemy.

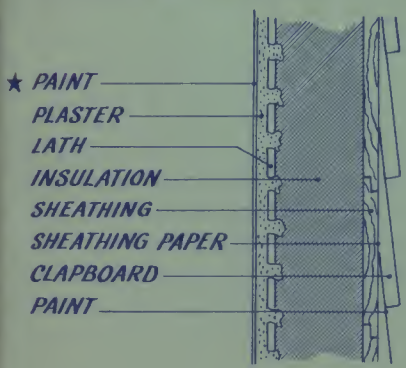
THE DEFENSE OF YOUR HOME LIES IN YOUR HANDS . . . in your constant watchfulness . . . and in the finishes and vapor

barriers you apply to give constant, 'round-the-clock protection. At all times make full use of the fine, durable coatings that represent the modern paint technician's highest skill. Obey these four "commandments" and you will win your never-ending war against water.

1. Keep the humidity within your home below 40 percent during winter weather.
2. Prevent moisture vapor from blasting its way outward by installing vapor barriers during construction and by painting the wall after it is in place.
3. Provide proper ventilation, permitting excess moisture vapor to escape through planned exits.
4. Prevent exterior moisture from getting into your house by repairing defects in construction and making sure your paint protection is adequate.

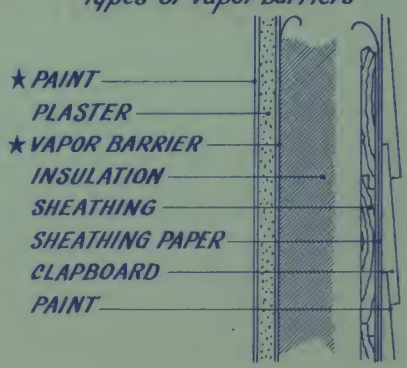
OLD CONSTRUCTION

Use paint as a vapor barrier



NEW CONSTRUCTION

Make doubly sure by using both types of vapor barriers



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